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REMARKS

Claims 1-20 are in the case. Claim 13 is objected to. Claims 12 and 17 are rejected under 35 USC § 102 over USPN 6,440,289 to Woo et al. Claims 1-11 and 13-16 are rejected under 35 USC § 103 over Woo et al. in view of USPN 6,303,014 to Taylor et al., and claims 18-20 are rejected under 35 USC § 103 over Woo et al. in view of Taylor et al. and further in view of Dubin et al. Claims 1, 13, and 18 have been amended and claims 2-4, 12, 14, 17, and 19 are hereby cancelled. No new matter has been introduced by the amendments, which are supported by the disclosure of the original claims and the specification. Reconsideration and allowance of the claims are requested.

CLAIM OBJECTIONS

Claim 13 is objected to for an informality, which is corrected by the present amendment. Reconsideration and removal of the objection to claim 13 are respectfully requested.

CLAIM REJECTIONS UNDER §102

Claims 12 and 17 are rejected under 35 U.S.C. 102 as being unpatentable over Woo et al. Claims 12 and 17 are hereby cancelled.

CLAIM REJECTIONS UNDER §103

Claims 1-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al. in view of Taylor et al. Independent claim 1 as amended claims, *inter alia*, a method of forming a structure on a substrate, including forming a conduction layer by applying a first current at a *first forward bias* and a *first density* for a first duration, applying a second current at a *second reverse bias* and a *second density* for a second duration, and cyclically applying the first current and the second current, wherein *the second density is between about two times and about four times the first density*.

Neither Woo et al., Taylor et al., nor any combination of the two describe this combination of process steps as claimed. Woo et al. describe only *a reverse current density that is less than the first current density*, as clearly depicted in Fig. 5 of Woo et

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al. Taylor et al. also only describe a reverse current density that is less than the first current density, as clearly depicted in Fig. 1 of Taylor et al.

The examiner asserts that many elements of the present invention as claimed, including the ratio of the forward and reverse current densities, are "result-effective variable[s] [that] one skilled in the art has the skill to calculate." While it might be true that one skilled in the art could eventually reproduce the invention claimed herein by trying all sorts of different combinations of steps and settings, such is not the test of obviousness. It is well settled that even though an invention may be a combination of prior elements and methods, one cannot use the invention as claimed to just pick and choose that unique combination of those elements or methods from the prior art. However, this is what appears to have been done in this case. This topic is discussed in more detail in the following section.

Thus, claim 1 patentably defines over Woo et al. in view of Taylor et al. Reconsideration and allowance of claim 1 are respectfully requested. Claims 2-4 are cancelled. Dependent claims 5-11 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 5-11 patentably define over Woo et al. in view of Taylor et al. Reconsideration and allowance of dependent claims 5-11 are respectfully requested.

Similar to that as described above in regard to claim 1, independent claim 13 as amended claims, *inter alia*, a method of forming a structure on a substrate, including forming a conduction layer by applying a ***first current at a forward bias*** and a ***first density*** for a first duration, where the first duration corresponds to a depletion time of the plating solution, applying a ***second current at a reverse bias*** and a ***second density*** for a second duration, where the second duration corresponds to a replenishment time of the plating solution, wherein ***the second density is between about two times and about four times the first density***.

As described above, neither Woo et al., Taylor et al., nor any combination of the two describe this set of limitations as described in claim 13, because neither Woo et al. nor Taylor et al. describe a reverse current density that is greater than the forward current density, and more specifically do not describe a reverse current density that is between

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about two times and about four times greater than the forward current density, as claimed in claim 13.

Thus, claim 13 patentably defines over Woo et al. in view of Taylor et al. Reconsideration and allowance of claim 13 are respectfully requested. Claim 14 is cancelled. Dependent claims 15-16 depend from independent claim 13, and contain additional important aspects of the invention. Therefore, dependent claims 15-16 patentably define over Woo et al. in view of Taylor et al. Reconsideration and allowance of dependent claims 15-16 are respectfully requested.

Claims 18-20 are rejected under 35 USC 103(a) as being unpatentable over Woo et al. in view of Taylor et al. and further in view of Dubin et al. Similar to that as described above in regard to claims 1 and 13, independent claim 18 as amended claims, *inter alia*, a method of forming a structure on a substrate, including forming a conduction layer by applying a *direct current patch deposition at a forward bias*, applying a first current at a *first forward bias* and a *first density* for a first duration, applying a second current at a *second reverse bias* and a *second density* for a second duration, wherein the *second density is between about two times and about four times the first density*, cyclically applying the first current and the second current *at a frequency of between about thirty hertz and about one hundred and thirty hertz*, and applying a *direct current bulk deposition at a forward bias*.

As described above, neither Woo et al., Taylor et al., nor any combination of the two describe this set of limitations as described in claim 18, because neither Woo et al. nor Taylor et al. describe a reverse current density that is greater than the forward current density, and more specifically do not describe a reverse current density that is between about two times and about four times greater than the forward current density, as claimed in claim 18. Dubin et al. do not remedy the deficiencies of Woo et al. and Taylor et al., in the Dubin et al. also do not describe the alternating biases of these degrees applied at the frequency as claimed, and in combination with the patch and bulk depositions.

Applicants again comment that by cutting enough steps from enough references, it might be possible to recreate the present invention as claimed. Once again, however, this is not sufficient to show that a claimed process is obvious, as described in more detail in the following section.

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Thus, claim 18 patentably defines over Woo et al. in view of Taylor et al. and further in view of Dubin et al. Reconsideration and allowance of claim 18 are respectfully requested. Claim 19 is cancelled. Dependent claim 20 depends from independent claim 18, and contains additional important aspects of the invention. Therefore, dependent claim 20 patentably defines over Woo et al. in view of Taylor et al. and further in view of Dubin et al. Reconsideration and allowance of dependent claim 20 are respectfully requested.

COMBINATION OF REFERENCES

As introduced above, it is respectfully submitted that the references cited do not support combining the elements as claimed in the present invention. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990) states that the PTO erred in rejecting a claimed invention as an obvious combination of the teaching of prior art references when the prior art provided no teaching, suggestion, or incentive supporting the combination. *See Northern Telecom Inc. v. Datapoint Corp.*, 15 U.S.P.Q.2d 1321, 1323, *In re Geiger*, 2 U.S.P.Q.2D 1276, 1278. *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878, 887, 8 U.S.P.Q.2d (BNA) 1468, 1475 (Fed. Cir.1988) states that one "cannot pick and choose among the individual elements of assorted prior art references to recreate the claimed invention."

There is nothing in the prior art cited to lead a person of ordinary skill to design a method like that of the present invention, other than the hindsight knowledge of this invention. The office action recites certain generalized benefits (realized in hindsight after considering the invention) as motivation for the combination of the references. However, these generalized motivations do not make obvious the combination of the references to produce the claimed invention. Only after considering the invention is it understood that combining the references (and adding a great deal more) tends to produce the motivating elements.

This, however, does not satisfy Section 103. The motivation to combine references cannot come from the invention itself. *See In re Oetiker*, 24 U.S.P.Q.2D 1443, 1446. The claims of the present application appear to have been used as a frame, and individual parts of separate prior art references were employed to recreate a facsimile of

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the claimed invention. *See W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303, 312. There is no explanation of what there was in the prior art that would have caused those skilled in the art to combine the references.

The examiner has the burden to show some teaching or suggestion in the references to support their use in the particular claimed combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 5 U.S.P.Q.2D at 1438-1439. In the absence of such, applicants respectfully suggest that the references are improperly combined.


CONCLUSION

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that he contact the undersigned before issuing the next office action.

Sincerely,

LUEDEKA, NEELY & GRAHAM, P.C.

By: 

Rick Barnes, 39,596